Remarks

In this discussion set forth below, Applicant does not acquiesce to any rejection or averment in this Office Action unless Applicant expressly indicates otherwise.

In the Final Office Action dated July 3, 2008, the following rejections are noted: claims 1-21 stand rejected under 35 U.S.C. § 112(1) as failing to comply with written description requirements; claims 1-3, 8, 9, 13 and 15 stand rejected under 35 U.S.C. § 102(b) over the Venkataraman reference ("An Efficient Bist Scheme Based on Reseeding of Multiple Polynomial Linear Feedback Shift Register"); claims 4-6 stand rejected under 35 U.S.C. § 103(a) over the Venkataraman reference in view of the Distler reference (U.S. Patent Pub. 2002/0099992); claim 7 stands rejected under 35 U.S.C. § 103(a) over the Venkataraman and Distler references in view of the Wang reference ("Generating Efficient Tests for Continuous Scan"); claim 17 stands rejected under 35 U.S.C. § 103(a) over the Venkataraman in view of the Barnhart reference ("OPMISR: The Foundation for Compressed ATPG Vectors"); and claims 20 and 21 stand rejected under 35 U.S.C. § 103(a) over the Venkataraman reference in view of the Jas reference ("Test Vector Decompression via Cyclical Scan Chains and Its Application to Testing Core-Based Designs"). Applicant respectfully traverses each of these rejections.

The § 112(1) rejection is improper because Applicant's specification provides written description in sufficient detail that one skilled in the art can reasonably conclude that Applicant has possession of the claimed invention. *See* M.P.E.P. § 2163. In particular, Applicant's specification provides sufficient support for selecting how to reconstruct merged vectors based on the number of merged vectors, as claimed. For example, Applicant teaches in paragraphs 0048 and 0049 of the specification that merge fill techniques may be used to fill don't care bits in a sequence of a relatively small number of vectors, whereas random fill techniques may be used to fill don't care bits in a sequence of a relatively large number of vectors. Moreover, Applicant submits that, "[t]he written description requirement does not require the applicant 'to describe exactly the subject matter claimed, [instead] the description must clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed.'" Union Oil Co. of California v. Atlantic Richfield Co., 208 F.3d 989 (Fed. Cir. 2000), *cert. denied*, 69 U.S.L.W. 3165 (Feb. 20, 2001) (No. 00-

249) (quoting In re Gosteli, 872 F.2d 1008, 1012, 10 U.S.P.Q.2d 1614, 1618 (Fed. Cir. 1989) (citations omitted)).

For at least these reasons, the § 112(1) rejection is improper, and Applicant requests that it be reconsidered and withdrawn.

The § 102(b) rejection of claims 1-3, 8, 9, 13 and 15 is improper because the Venkataraman reference does not teach or suggest all the features recited in Applicant's claims. In particular, Venkataraman fails to disclose selecting between a random fill process and a merge fill process when reconstructing vectors from a merged vector, and fails to disclose such selection being based on the number of compatible vectors. Applicant has been unable to ascertain any teaching or suggestion from the cited portions of the Venkataraman reference regarding reconstructing vectors from a merged vector, how to fill the don't care bits in the reconstructed vectors, or selecting between different filling techniques based on the number of merged vectors, as claimed by Applicant.

It appears that all the passages cited in the Final Office Action relate to removing testcubes for data compaction without discussion of data reconstruction. For example, the cited passage on Page 574, Col. 2:16-18 of Venkataraman relates to merging testcubes, not to reconstructing previously merged vectors. Likewise, the cited "Experimental Results" section on Page 576 discusses how the authors investigated the effectiveness of testcube compaction, not any subsequent reconstruction. Furthermore, the cited passage that includes the last paragraph on Page 575 and the first paragraph on Page 576 discusses a polynomial-based strategy to determine which testcube can be removed during compaction, and does not relate to selecting between different methods of filling don't cares in reconstructed vectors.

Applicant therefore submits that no correlation has been made between the disclosure of the Venkataraman reference and all the features recited in Applicant's claims. As such, the § 102(b) rejection is improper, and Applicant requests that it be reconsidered and withdrawn.

The § 103(a) rejection of claims 4-6 is improper because the Distler reference appears to provide no teaching or suggestion that would cure the deficiencies of the Venkataraman reference noted above, and thus the proposed combination does not disclose all the features in Applicant's claims. Moreover, while the cited portions of Distler

generally mention that constant or repeat-count values have been used to fill don't care bits, Distler provides no teaching of or appreciation for the selection and use of different fill methods based on the number of merged vectors. For at least these reasons, Applicant submits that the § 103(a) rejection over Venkataraman in view of Distler is improper, and requests that it be reconsidered and withdrawn.

The § 103(a) rejection of claim 7 is improper because the Wang reference appears to provide no teaching or suggestion that would cure the deficiencies of the underlying (and improper) combination of Venkataraman with Distler, as noted above. In particular, Wang appears to include no teaching that relates to processes for filling don't care bits, much less for selecting a filling process based on the number of merged vectors. For at least these reasons, Applicant submits that the § 103(a) rejection over Venkataraman and Distler in view of Wang is improper, and requests that it be reconsidered and withdrawn.

The § 103(a) rejection of claim 17 is improper because the Barnhart reference appears to provide no teaching or suggestion that would cure the deficiencies of the Venkataraman reference, as noted above. Moreover, to the extent that the cited portions of Barnhart disclose different don't care bit fill techniques, they are disclosed in the context of generating test vectors on the fly as opposed to generating them ahead of time and storing them in buffers (*see, e.g.*, the third and forth paragraphs on Page 753). As such, the cited portions of Barnhart do not concern data compression, and instead offer an alternative to compressing stored test vectors by generating them on the fly. Applicant therefore submits that one of skill in the art would find no reason to modify the testcube compaction teachings of Venkataraman using the teachings of Barnhart related to an alternative to data compression. For at least these reasons, Applicant submits that the § 103(a) rejection over Venkataraman in view of Barnhart is improper, and requests that it be reconsidered and withdrawn.

The § 103(a) rejection of claims 20 and 21 is improper because the Jas reference appears to provide no teaching or suggestion that would cure the deficiencies of the Venkataraman reference noted above. Moreover, the cited portion of Jas appears to relate to the ordering of test vectors within a vector set, whereas Applicant's claims recite ordering of multiple merged vector sets based on compatibility of the first vector of one set with the last vector of another set. Applicant finds nothing in Jas that teaches the ordering of merged

vector sets in the manner claimed. For at least these reasons, Applicant submits that the § 103(a) rejection over Venkataraman in view of Jas is improper, and requests that it be reconsidered and withdrawn.

In view of the remarks above, Applicant believes that each of the rejections/objections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063.

Please direct all correspondence to:

Corporate Patent Counsel
NXP Intellectual Property & Standards
1109 McKay Drive; Mail Stop SJ41
San Jose, CA 95131

By: _____
Name: Robert J. Crawford
Reg. No.: 32,122
(NXPS.465PA)

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